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U. S. Serial No. :

09/821,605

PTO 2002-3868

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Publication Date

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2. ☐ Article

Author

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Type of Document

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Language

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8/8/02

(11)公告編號: 231707

(12)中華民國83年(1994)10月01日

新 型

全 2 頁

(51)Int. Cl. : G06K9/36

11/00

件

(54)名 稱: 一種消除影像橫條現象之裝置

(21)申 請 案 號: 81214018

(22)申請日期: 中華民國81年(1992)10月17日

(72)創 作 人:

黃英俊

新竹市科學園區研發一路五號

(71)申 請 人:

力捷電腦股份有限公司

新竹市科學園區研發一路五號

(73)代 理 人: 陳慶暉 先生 洪武雄 先生

1

2

PTO 2002-3868
S.T.C. Translations Branch

[57]申請專利範圍:

1. 一種消除影像橫條現象之裝置, 包括

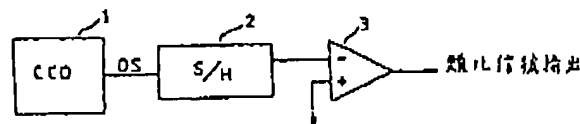
電荷耦合元件(CCD), 將感應之影像光信號轉換成電壓信號;

差動放大電路, 將該電荷耦合電路所提供的黑信號輸出信號與光感應輸出信號之相對差, 轉換成類比信號輸出;

其特徵在於,

在電荷耦合元件的黑信號輸出信號端與差動放大電路之間串聯電阻, 並且並聯電容接地, 形成濾波電路, 該電阻與該電容之值係配合該電荷耦合元件的特性阻抗與溫度特性而選用, 以降低該電荷耦合元件的黑信號輸出信號所造成的誤差。

圖示簡單說明:



第 1 圖

第 1 圖為習知之使用取樣-持住電路, 以行電壓誤差補償之簡易電路方塊圖;

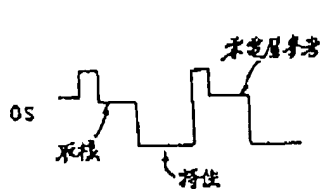
第 2a 圖為第 1 圖之取樣-持住電路的簡單操作信號說明; 而第 2b 圖為第 1 圖中取樣-持住電路之較詳細電路說明;

第 3 圖為習知之使用差動放大電路, 以行電壓誤差補償之簡易電路方塊圖;

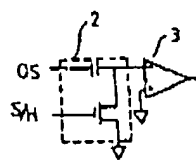
第 4 圖為本創作之實施例, 設有濾波電路, 可減少電壓誤差而消除影像橫條現象之電路圖;

第 5a 圖為未使用本創作電路前, 與第 5b 圖所示為使用本創作加有低通濾波電路後, 所量測之 DOS 信號差異之示波器顯示實驗畫面。

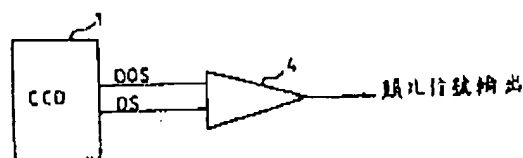
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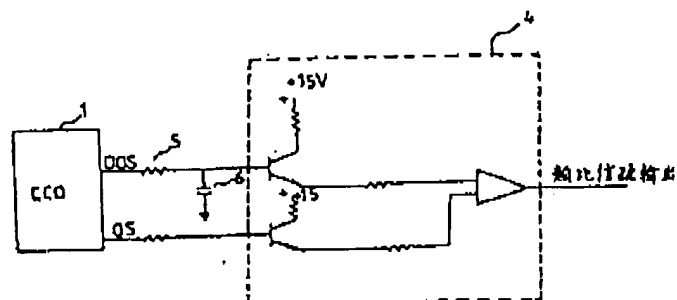
第2a圖



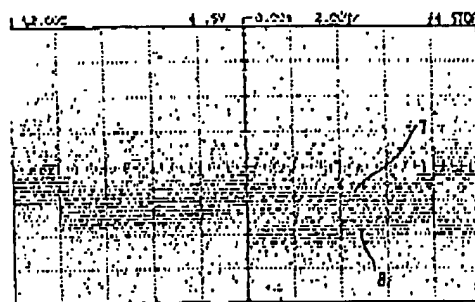
第2b圖



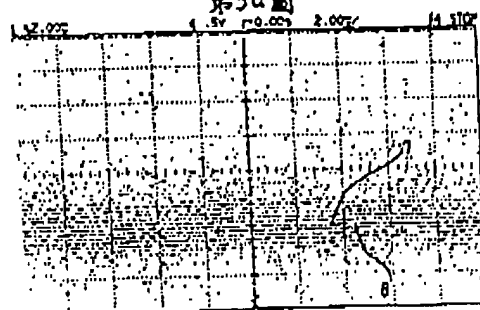
第3圖



第4圖



第5a圖



第5b圖

PTO 02-3868

Chinese Article
Yingjun

A DEVICE ELIMINATING HORIZONTAL STRIPE PHENOMENON FROM IMAGES
[Yizhong Xiaochu Yingxiang Hengtiao Xianxiangzhi Zhuangzhi]

Huang Yingjun

NOTICE: COPYRIGHT RESTRICTIONS MAY APPLY.

UNITED STATES PATENT AND TRADEMARK OFFICE
Washington, D.C. August 2002

Translated by: FLS, Inc.

Translated Title: A DEVICE ELIMINATING HORIZONTAL STRIPE
PHENOMENON FROM IMAGES

Chinese Title: Yizhong Xiaochu Yingxiang Hengtiao
Xianxiangzhi Zhuangzhi

Author's Affiliation: N/A

Source: N/A
PUBLICATION DATE (43): 19941001
APPLICATION NUMBER (21): 81214018
APPLICATION DATE (22): 19921017
APPLICANT (71): Lijie Diennao
Limited
Pp. 2259-2260

[57] Claims:

1. A device eliminating horizontal stripe phenomenon from images comprising:

a charge-coupled device (CCD) which converts the induced image's optical signals into voltage signals;

differential amplifier circuit which converts into analog signal output the relative difference between the output signal of the black signal supplied by the above-mentioned charge-coupled circuit and the photo-induced output signal;

characterized in that

between the black signal output signal terminal of the charge-coupled device and the differential amplifier circuit an electric resistance is connected in series whereas a capacitance is connected in parallel and grounded, forming a filter circuit, and the parameters of this electric resistance and electric capacitance are selected to match the characteristic impedance and temperature characteristics of the said charge-coupled device, to reduce the error created by the black signal output signal of the said charge-coupled device.

Explanation of Figures:

Fig. 1 is a simple circuit block diagram of a sample-and-hold circuit known in the Art and to compensate for voltage error;

Fig. 2a is a simple explanation of the operating signals of the sample-and-hold circuit from Fig. 1; Fig. 2b is a detailed circuit layout of the sample-and-hold circuit from Fig. 1;

Fig. 3 is simple circuit block diagram of a differential amplifier circuit know in the Art and used to compensate for voltage error;

Fig. 4 is a circuit diagram of an embodiment of this invention, equipped with a filter circuit which can reduce voltage error and eliminate the horizontal stripe phenomenon;

Fig. 5a is an experimental diagram displayed on the oscilloscope prior to using the circuit of this invention, while Fig. 5b shows a similar diagram of the measured DOS signal difference after using this invention with a low pass filter.

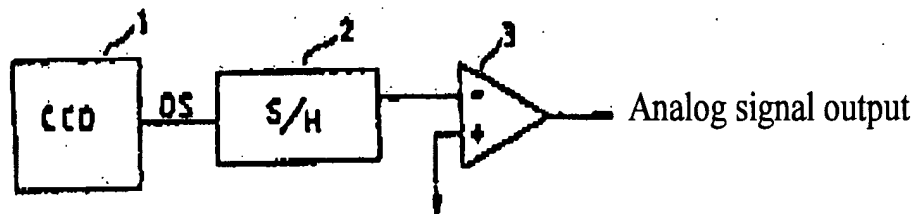


Figure 1

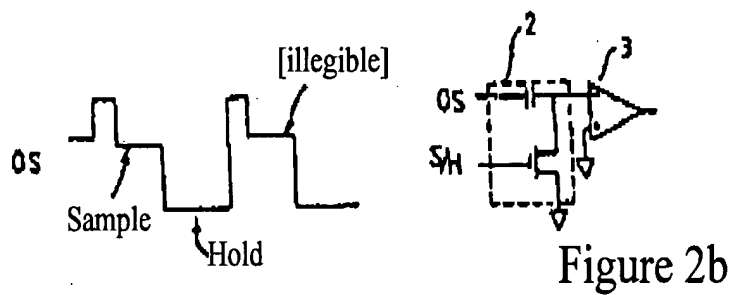


Figure 2b

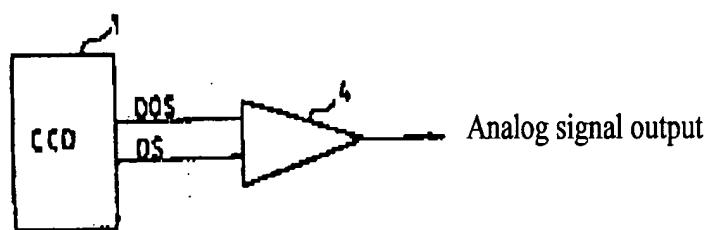


Figure 3

Figure 4

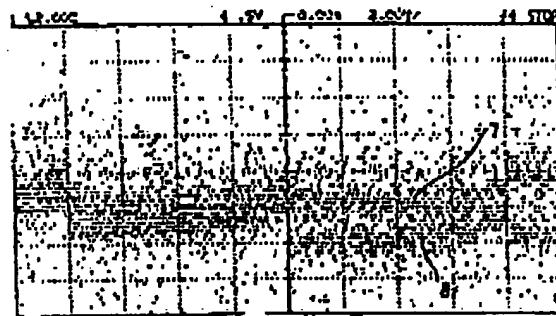
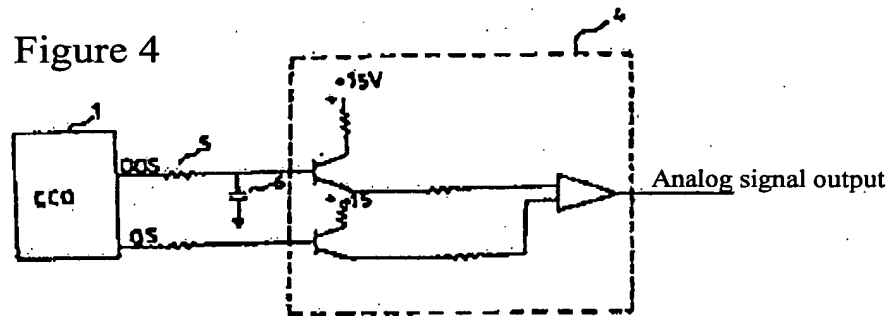


Figure 5a

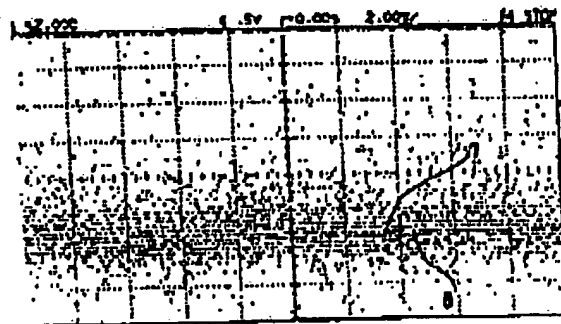


Figure 5b

中 華 民 國 專 利 公 報 (19)(12)

(11)公告編號: 231767

(14)中華民國83年(1994)10月01日

新 型

全 2 頁

(5)Int. Cl. : 006K9/36

11/00

附
件

(54)名 稱: 一種消除影像橫條現象之裝置

(21)申 請 案 號: 81214018

(22)申請日期: 中華民國81年(1992)10月17日

(72)創 作 人:

黃英俊

新竹市科學園區研發一路五號

(71)申 請 人:

力捷電腦股份有限公司

新竹市科學園區研發一路五號

(73)代 理 人: 陳慶暉 先生 洪武雄 先生

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[57]申請專利範圍:

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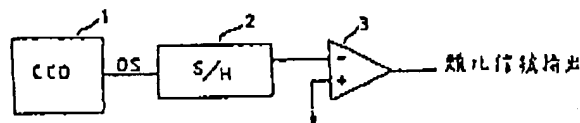
電荷耦合元件(CCD), 將感應之影像光信號轉換成電壓信號;

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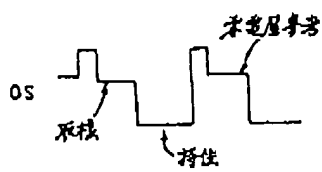
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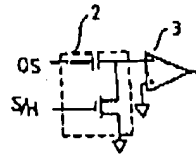
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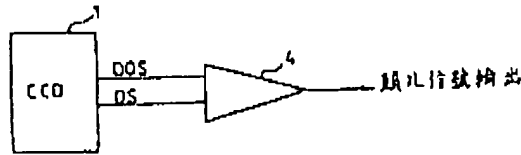
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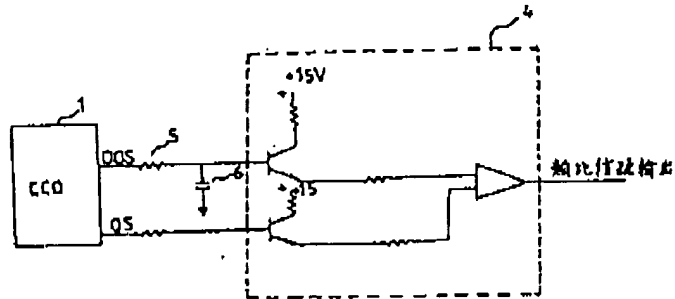
第2a圖



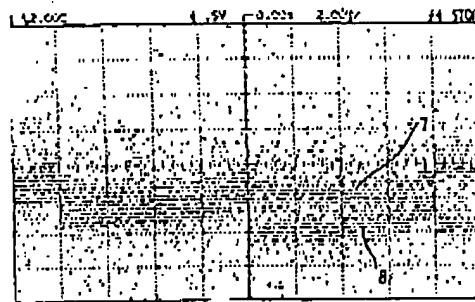
第2b圖



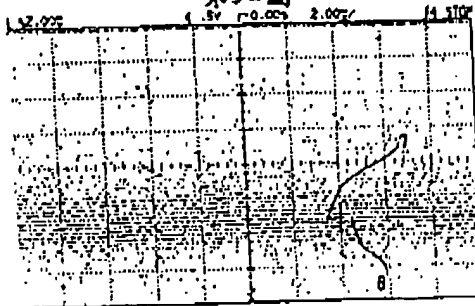
第3圖



第4圖



第5a圖



第5b圖

-1-

TRANSLATION OF NOTICE OF FIRST REJECTION

March 15, 2002

1. Appl. No.: 90106465
Int. Cl.: H01L 27/14
2. Title of Invention: Charge Amount Detection Circuit
and Two-Dimensional Image Sensor Using Same
3. Applicant: Sharp Kabushiki Kaisha
Address: Japan
4. Representative: J. K. Lin
Address: 7th Floor, 125, Nanking East Road, Sec. 2
Taipei
5. Date of Filing: March 20, 2001
6. Priority: 1. March 30, 2000; Japan 2000-95508
7. Examiner:
8. Result of Examination:
Summary: No patent can be granted on the invention.
Provisions Applied: Patent Law Articles 19 and 20(2)
Grounds:

-2-

(1) The application entitled "Charge Amount Detection Circuit and Two-Dimensional Image Sensor Using Same" primarily relates to the dual use of a part of a device of a voltage amplifier circuit as a part of a device constituting an LPF circuit.

(2) For example, the application 231767 entitled "Device Eliminating Vertical Lines from Video Pictures" published on October 1, 1994 discloses an LPF circuit interposed between a CCD element and a differential amplifier circuit. The circuit described in the embodiment in reference to Figure 4 is similar to Figure 10B of the present application. Hence, the application is a mere utilization of conventional technology or knowledge known prior to applying for a patent, and can be accomplished easily by persons skilled in the art. The application divulges nothing more than a dual use of a generic conventional LPF circuit as a part of a device of a voltage amplifier circuit. The application therefore lacks patentability.

Since the invention fails to satisfy legal requirements to issue a patent thereon for the above reasons, the examination is concluded as Summary above under Article 20(2).

-3-

Remarks: If the applicant has any comments on this result of the examination, a request for a re-examination may be filed in Patent Office within a period of 30 days from the following day of the day of receipt of the Notice by submitting a statement of reasons in duplicate and a fee of NT\$ 6,000. If the specification and drawings consist of a total of 50 pages or more, an additional fee of NT\$ 500 should be paid for every 50 pages. Any number of pages less than 50 pages are rounded up to 50 pages for fee calculation purposes.

正本

經濟部智慧財產局專利核駁審定書

受文者：夏普股份有限公司（代理人：林志剛先生）

地址：台北市南京東路二段一二五號七樓

發文日期：中華民國九十一年三月十五日

發文字號：（八九一）智專二（一）04055字

第0九一八三〇〇四四一五號

本 信 日	發 信 日
2002 年 2 月 19 日	2002 年 3 月 15 日

專利分類IPC(7).....H01L 27/14

一、申請案號數：〇九〇一〇六四六五

二、發明名稱：電荷量檢出電路及使用其之二次元畫像感測器

三、申請人：

名稱：夏普股份有限公司

地址：日本

四、專利代理人：

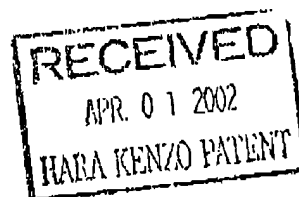
姓名：林志剛 先生

地址：台北市南京東路二段一二五號七樓

五、申請日期：九十年三月二十日

六、優先權項目：

1 2000/03/30 日本2000-95508



09183004415

七、審查人員姓名：唐和誠 委員

八、審定內容：

主文：本案應不予專利。

依據：專利法第二十條第二項。

理由：

(一) 本案「電荷量檢出電路及使用其之二次元畫像感測器」主要係將構成低通濾波器電路之元件一部為由構成電壓放大電路之元件一部兼用。

(二) 如附件民國八十三年十月一日公告之公告編號第二三一七六七號案「一種消除影像橫條現象之裝置」所示，該引證案亦在電荷耦合元件與差動放大電路間形成濾波電路，其第四圖所示之實施例電路與本案第10B圖相仿。本案係運用申請前既有之技術或知識，本案僅籠統的使用之該低通濾波器電路與電壓放大電路之元件一部兼用，乃熟習該項技術者所能輕易完成，不具進步性。

據上論結，本案不符法定專利要件，爰依專利法第二十條第二項，審定如主文。

局長
陳明邦

依照分層負責規定授權單位主管決行

如不服本審定，得於文到之次日起三十日內，備具再審查理由書一式二份及規費新台幣陸仟元整（專利說明書及圖式合計在五十頁以上者，每五十頁加收新台幣五百元，其不足五十頁者以五十頁計），向本局申請再審查。

